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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,514	06/28/2000	Li Gong	83000.930C/P2136/AES	1326

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EXAMINER	
CALLAHAN, PAUL E	
ART UNIT	**PAPER NUMBER**
2137	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/607,514	GONG, LI	
	Examiner	Art Unit	
	Paul Callahan	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11,13-25 and 29-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11,13-25 and 29-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

2. Claims 1, 3-11, 13-25 and 29-31 are pending in this application and have been examined.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3-11, 13-25 and 29-31 have been considered but are moot in view of the new ground(s) of rejection

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-7, 11, 13-17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin (5893077) in view of McManis US 5,692,047, and "Microsoft SQL Server In The Active Internet", Microsoft Corporation, 3-12-1996, pages 1-8. In figure 9, Griffin shows the serialization of an object (element 387). This meets the

limitation of taking a snapshot by serializing the state of a live object. The object has necessarily been instantiated in a runtime environment. Griffin does not say that a signature is associated with the serialized object or that the association between the two is maintained. McManis teaches a digital signature that is made by encrypting an object that is a "snapshot" of an executable with a private key in col. 2 lines 60-67, col. 3 lines 1-30. Decryption using the corresponding public key not only retrieves the data, but also indicates that the data was encrypted by the private key's holder. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the serialized object of Griffin to generate the signature so that the signature could be used as a proof against the object. Motive to make this combination is found in col. 13 lines 36-42 where the method is taught as being carried out on an SQL Server. Such servers do support digital signature techniques as is taught by Microsoft at page 3 "Conduct Business on The Internet".

As for claim 3, Deserialization as taught in element 508 of figure 11A in Griffin, meets the limitation of constructing a new object using said snapshot. The snapshot is stored in an event object file that reads on applicant's another object.

Claim 4 is obvious because signatures such as those described by McManis are not valid with objects that have been altered after signing as is taught in col. 2 lines 60-67 and col. 3 lines 1-30. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the serialized object of Griffin to

generate the signature so that the signature could be used as a proof against the object. Motive to make this combination is found in col. 13 lines 36-42 where the method is taught as being carried out on an SQL Server. Such servers do support digital signature techniques as is taught by Microsoft at page 3 "Conduct Business on The Internet".

Claim 5 is rendered obvious by McManis's teaching of signing data as is taught in col. 2 lines 60-67 and col. 3 lines 1-30. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the serialized object of Griffin to generate the signature so that the signature could be used as a proof against the object. Motive to make this combination is found in col. 13 lines 36-42 where the method is taught as being carried out on an SQL Server. Such servers do support digital signature techniques as is taught by Microsoft at page 3 "Conduct Business on The Internet".

As for claims 6 and 7, they are obvious because multiple signatures are taught by McManis at col. 3 lines 5-15. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the serialized object of Griffin to generate the signature so that the signature could be used as a proof against the object. Motive to make this combination is found in col. 13 lines 36-42 where the method is taught as being carried out on an SQL Server. Such servers do support digital signature techniques as is taught by Microsoft at page 3 "Conduct Business on The Internet".

Claims 11 and 13-17 are directed towards a computer program product embodied in a memory medium causing a computing device to perform the method of claims 1 and 3-7 and are therefore rendered obvious for the same reasons as for claims 1 and 3-7.

With respect to the arrays in claim 29, arrays are fundamental to structured data. The event object file is structured data.

6. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin, McManis and Microsoft as applied to claims 1-4 above, and further in view of Fischer, EPO 0 638 860 A2.

The combination of Griffin, McManis and Microsoft teach serializing and storing objects along with signatures that authenticate the serialized objects, as is discussed supra in the rejection of claim 1. They do not say that the program code that performs these functions is an object. In lines 40-50 of column 2, Fischer teaches the advantage of object-oriented programming, saying that it is polymorphic. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement modules to reap the rewards of polymorphism. At some point this would require the snapshot and signature to be stored within the processing object.

7. Claims 8-10, 18-22, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin, McManis, and Microsoft as applied to claims 1 and 11, and further in view of Chaplin (5315655).

Griffin, McManis and Microsoft teach a system of signing serialized objects. McManis teaches encryption of data as a way to protect it in col. 2 lines 50-67 and col. 3 lines 1-30. Encryption keys are inherently generated prior to encryption. They do not say that the leftover unencrypted objects are deleted. Figure 7 of Chaplin clearly shows the encryption of data in part 704 and then the deletion of the unencrypted copy of the data in part 705. Chaplin also teaches decryption of data in figure 8. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete unencrypted copies of the objects after the objects had been encrypted. Unencrypted copies could otherwise be used to circumvent the protection provided by the encryption.

8. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin, McManis, and Microsoft in view of Fischer as applied to claim 22 above, and further in view of Chaplin.

The combination of Griffin, McManis, Microsoft and Fischer teaches a system of signing only the critical objects that make up a larger object where the signature is made from the critical objects. As shown by element 114 of figure 10, Fischer's system can encrypt the cells and the digital signatures. Encryption keys are inherently generated prior to encryption. Fischer does not say that the leftover unencrypted objects

are deleted. However, Figure 7 of Chaplin clearly shows the encryption of data in part 704 and then the deletion of the unencrypted copy of the data in part 705.
Chaplin also teaches decryption of data in figure 8. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete unencrypted copies of the critical objects after the objects had been encrypted. Unencrypted copies could otherwise be used to circumvent the protection provided by the encryption.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Caldwell, can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is: (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

4-15-2005

Paul Callahan